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ABOUT YOUR SMOKE

General Report SA-GR 23
April 1982



U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE
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in cooperation with

SOUTHERN STATE FORESTERS AND EXTENSION SERVICES

What's wrong with my smoke?

What's wrong with your smoke?—It's not just water vapor, you know: Wildfires, prescribed fires, brush burning, or any type of open burning can smoke up homes and communities, and reduce visibility on roads and airports.

Why should I be concerned about my smoke?—Because **you**, as the person responsible for the fire, are also responsible for its smoke. You are responsible for keeping your fire from escaping from your control and causing any damage.

What's in smoke that makes it so bad?

Much of the content of smoke is of little concern. In fact, over 90 percent of forest smoke is water vapor and carbon dioxide, and neither are pollutants. However, other things in your smoke can be harmful even though only produced in small quantities. The major problem in smoke is the small particles. They can't be seen with the naked eye but, collectively and in large quantities, they can reduce visibility drastically. For this reason, burning upwind of highways and airports is especially dangerous. The particles can also be inhaled into the lungs and compound any

respiratory problem. Smoke can irritate the eyes, nose, and throat, and make breathing difficult.

How can I make sure my smoke causes no problems?

The first step is to be sure to follow all state and local regulations. A permit is required in some areas, others require notification, and in many instances, you must meet certain requirements before burning.

The second step is to **look downwind** to see if there are any areas that would be affected by your smoke. If so, plan to burn on a day when the wind will be from a different direction. Also, burn as small an area as practical at one time to reduce the amount of smoke produced.

How far downwind should I look?

The distance depends on many weather factors, the amount and type of dead brush, branches, debris or other fuel, the burning techniques you plan to use and, most important, the *size of the area* you plan to burn.

Where's the best source for more information?

Someone can help you at your local State forestry office. If you don't know how to contact them, your local fire department or county extension agent would be a good place to start. Many States have also developed smoke management guidelines to assist you. Generally, burning an area of less than 1 acre will not cause a serious problem; however, it could be irritating to your neighbor—especially if one is planning to paint or hang out the wash. Check before you burn! If you are burning off piles of debris or a large field, look downwind at least 2 miles to see if your smoke would blow onto any populated areas or other areas that may be adversely affected if smoke reaches it. If in doubt, contact your local forestry representative before burning.

Why are piles of debris more of a problem?

They produce more smoke. There are usually greater amounts of fuel to burn, more moisture, more soil, and more compaction, thus less oxygen is available for combustion. Larger size fuel also takes longer to burn. All these factors result in more smoke produced and for a longer time.

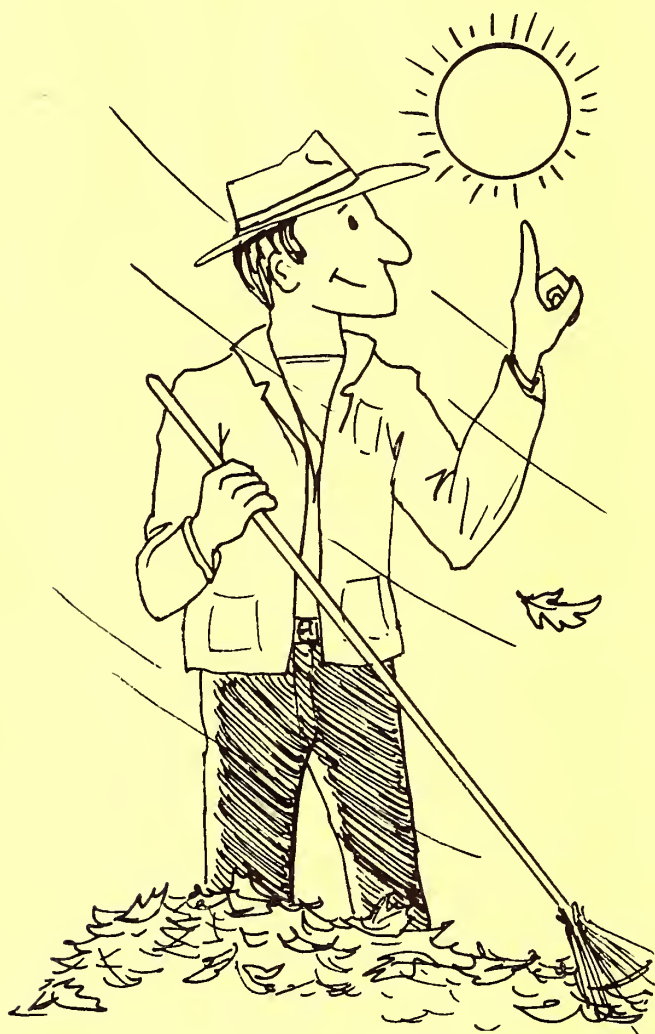
If you must burn piled debris, be sure you secure advice from someone knowledgeable in smoke management. Build *small* piles and *shake* the debris while piling to reduce the amount of dirt. Pile when the ground is dry, and remember—smoke can be a special problem if piles will burn into the night. Smoke from piled debris will affect a much larger area than smoke from scattered debris because more smoke is produced and it lasts longer.

Before you burn contact your county forestry office to secure the latest weather forecast.

Your best choice may be to use some other method to dispose of logs, branches, stumps, and related debris rather than burning them as rubbish. Reduce the volume to burn by separating good firewood and pulpwood. If necessary, give it away! Higher costs for heating homes have created a rising demand for firewood. You should have little trouble finding someone who will be glad to have any firewood you can't use yourself. Try to reduce the debris sufficiently so you will not have to burn. Even if you still have to burn what's left, less smoke will be produced, and it will not last as long.



Thanks for the advice!—I'm going to get help right now in planning these burns, and to manage my smoke.



You are welcome! Just remember: eliminate any adverse effects from your smoke by using the following guides.

BEFORE THE FIRE

1. Check with your local forestry office before doing any burning.
2. Follow all air quality and burning regulations.
3. Notify your neighbors before burning.
4. Check the latest weather forecast.
5. Check to see what's downwind of your fire. Use caution when near or upwind of smoke-sensitive areas.
6. Don't pile debris close to other material that may catch on fire.
7. Keep dirt out of piles (let debris dry and then shake it before piling).
8. Use as much wood as possible for pulpwood, firewood, etc., to reduce the amount of debris left to burn.

DURING THE BURN

1. Don't smoke up your neighbor's house.
2. Burn against the wind when possible.
3. Have adequate equipment, people and fire control lines so the fire can't escape.
4. If unfamiliar with burning in the open, burn first in small areas of 1 acre or less.

Two reasons why open burning is being restricted:

- Escaped Fires
- Smoke Problems

PREScribed BURNING IN THE FOREST

The major commercial timber stands in the South are pine. Fire has been a part of these southern pine forests as far back as we can determine, and it always will be. We cannot eliminate fire from the forests, but we can reduce damage from such fires.

We can use fire to benefit the forest resources. The principle is much the same as using fire to cook our food and warm our homes. However, if this fire is not controlled, it can destroy our homes. Low intensity, controlled fires can be used in our pine forests under certain weather conditions, and with burning techniques that do not damage the timber. Simultaneously, the skillful use of fire can improve forest resources such as wildlife habitat and forest range for cattle. Prescribed fires also help control undesirable plants and forest diseases. Fires can be prescribed to prepare a site for a new stand of trees, without the costs of heavy equipment and chemicals used in other site treatments, and their related risks to the environment. Prescribed fires can protect trees, wildlife, and the environment from the danger of wildfires by consuming the dead brush, wood, and other debris on the ground, under controlled conditions. Used properly, fire can increase timber production and improve the other forest resources. Foresters refer to this as *prescribed fire*. Today, it is used by all Federal and State resource agencies, forest industries, and private forest landowners on millions of acres. In the southern pine forests, it is one of the more important tools of the forest resource manager.

These fires can escape into nearby stands and cause damage if not used properly. They can burn too intensely and cause damage to the forest resource instead of improving it. They can cause erosion and reduce the quality of soil and water. If you burn brush in the open or burn off a field, you could cause the same problems if the fire escapes!